

Date: Monday, 7/9/2007 11:40:02 AM
 User: Kim Johnston

Process Sheet

30

Customer : CU-DAR001 Dart Helicopters Services Drawing Name : 407 FWD X-TUBE
 Job Number : 33322
 Estimate Number : 12348
 P.O. Number : N/A Part Number : D407667105
 This Issue : 7/9/2007 S.O. No. : N/A Drawing Number : D407-667-145 REV B
 Prsht Rev. : NC Project Number : N/A
 First Issue : N/A Type : LANDING GEAR Drawing Revision : B
 Previous Run : 32936 Material : N/A
 Due Date : 7/23/2007 Qty: 1 Um: Each
 Written By : JS 07.07.09
 Checked & Approved By : JS 07.07.09
 Comment : Est Rev: 05.09.01 Add holes for compatibility with Bell
 Skid tubes KJ/JLM

Additional Product

Job Number:



Seq. # Machine Or Operation: Description :

1.0 DC DOCUMENT CONTROL



Comment: DOCUMENT CONTROL

Photocopy bluefile and create labels as per PPP D206-667-105 CHG002

JS 07.07.09 (1)

2.0 D6010115 Crosstube Material



Comment: Qty.: 1.0000 Each(s)/Unit Total: 1.0000 Each(s)

Pick:

Qty Part number Description Batch

1 D6010-115 Crosstube B26424

Check OD = 2.250"; ID = 1.610"

JS 07.11.21 (1)

3.0 MORI SEIKI MORI SEIKI CNC LATHE LARGE



Comment: MORI SEIKI CNC LATHE LARGE

1-Fill tube with sand & install plugs DT8673on both ends as per Folio FA249

2-Turn first side as per Folio FA249

3-Deburr & Inspect for surface damage. Repair damage within limits as per Dwg D407-667-145.

JS 07.11.21 (1)

4.0 QC1 INSPECT ALL DIM TO DIM SHEET



Comment: INSPECT ALL DIM TO DIM SHEET

JS 07.11.21 (1)

| W/O: | | WORK ORDER CHANGES | | | | | |
|------|------|--------------------|----|------|-----|-------------------------------------|--------------------------|
| DATE | STEP | PROCEDURE CHANGE | By | Date | Qty | Approval Chief Eng / Prod Mgr | Approval QC Inspector |
| | | | | | | | |
| | | | | | | | |

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

QA: N/C Closed: _____ Date: _____

| NCR: | | WORK ORDER NON-CONFORMANCE (NCR) | | | | | | |
|------|------|----------------------------------|-----------------------------|---------------------------------|----------------|---------------------------|-----------------------|--------------------------|
| DATE | STEP | Description of NC Section A | Corrective Action Section B | | | Verification Section C | Approval Chief Eng | Approval QC Inspector |
| | | | Initial Chief Eng | Action Description Chief Eng | Sign & Date | | | |
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NOTE: Date & initial all entries

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Drawing Name: 407 FWD X-TUBE

Job Number: 33322

Part Number: D407667105

Job Number:



Seq. #:

Machine Or Operation:

Description :

5.0

MORI SEIKI

MORI SEIKI CNC LATHE LARGE



Comment: MORI SEIKI CNC LATHE LARGE

1-Turn second side as per Folio FA249

2-Deburr & Inspect for surface damage. Repair damage within limits as per Dwg D407-667-145.

3-Remove sand and plugs

4-Scribe part # and batch # using vibrating stylus as per Dwg D206-667-145

Inside of Cuff(Donot engrave on outside of tube)

BC 07-11-21

①

6.0

QC1

INSPECT ALL DIM TO DIM SHEET



Comment: INSPECT ALL DIM TO DIM SHEET

BC 07-11-21

①

7.0

QC8

SECOND CHECK



Comment: SECOND CHECK

OK 07/11/21

①

8.0

LANDING GEAR 1

LANDING GEAR RESOURCE 1



Comment: LANDING GEAR RESOURCE 1

ALWM

07-11-22

P10

1-Polish entire outside surface of crosstube

9.0

QC5

INSPECT WORK TO CURRENT STEP



Comment: INSPECT WORK TO CURRENT STEP

OK 07/11/22

①

10.0

HAND FINISHING1

HAND FINISHING RESOURCE #1



Comment: HAND FINISHING RESOURCE #1

Chemical Conversion Coat as per QSI 005 4.1

EL 7-11-22

11.0

BENDING

BENDING MACHINE







Comment: BENDING MACHINE

Bend tube as per Dwg D407-667-145 using CNC bender program 407-fw and Folio FT016

EL 7-11-26

| W/O: | | WORK ORDER CHANGES | | | | | |
|------|------|--------------------|----|------|-----|-------------------------------------|--------------------------|
| DATE | STEP | PROCEDURE CHANGE | By | Date | Qty | Approval Chief Eng / Prod Mgr | Approval QC Inspector |
| | | | | | | | |
| | | | | | | | |

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes ☒ No ☐ DQA: PD Date: 08/01/03
 QA: N/C Closed: _____ Date: _____

| NCR: | | WORK ORDER NON-CONFORMANCE (NCR) | | | | | | |
|----------|------|--|---|---------------------------------|----------------|--|---|---|
| DATE | STEP | Description of NC Section A | Corrective Action Section B | | | Verification Section C | Approval Chief Eng | Approval QC Inspector |
| | | | Initial Chief Eng | Action Description Chief Eng | Sign & Date | | | |
| 07.14.07 | 17 | Height of tube is 2365" (should be 2354) |  07.10.07 PC QS1042 | Part is OK | ER 7-11-07 |  Hu/29 |  07.10.07 PC QS1042 |  07.14/29 |
| | | | | | | | | |
| | | | | | | | | |

NOTE: Date & initial all entries

Date: Monday, 7/9/2007 11:40:02 AM

User: Kim Johnston

Process Sheet

Customer: CU-DAR001 Dart Helicopters Services

Drawing Name: 407 FWD X-TUBE

Job Number: 33322

Part Number: D407667105

Job Number:



Seq. #

Machine Or Operation:

Description:

12.0

QC6

DIMENSIONAL CHECK



Comment: DIMENSIONAL CHECK

UP 07.10.27 (1)

13.0

LANDING GEAR 1

LANDING GEAR RESOURCE 1



Comment: LANDING GEAR RESOURCE 1

1-Drill pilot holes in tube using drill Jig DT8541 & DT8542 as per Dwg D407-667-145. Drill all (3) top holes.

2-Drill and Ream all holes in tube to finish size using drill Jig DT8541 & DT8542 as per Dwg D407-667-145
Check dimensions between holes on all four sides.

3-Flip tube and switch drilling Jigs from right to left, left to right. Locate Jigs off existing holes using "T" pins.

4-Drill pilot holes using drill Jig DT8541 & DT8542 as per Dwg 407-667-145. Drill only the top (2) holes.

5-Drill & ream the top (2) holes to finish size using drill Jig DT8541 & DT8542 as per Dwg D407-667-145

6-Drill Fwd rivet holes using drill Jig DT8787FWD as per Dwg D206-667-145. Note: Fwd side has 3x top holes.

7-Drill Aft rivet holes using drill Jig DT8787AFT as per Dwg D407-667-145.

8-C'sink holes as per Dwg D407-667-145. Allow rivet to sit below surface to compensate for paint.

9-Deburr & Inspect for surface damage. Repair damage within limits as per Dwg D407-667-145

SR/BL

7-11-27

ANM 07-11-28

14.0

HAND FINISHING1

HAND FINISHING RESOURCE #1



ANM 07-11-28



Comment: HAND FINISHING RESOURCE #1

Chemical Conversion Coat as per QSI 005 4.1

15.0

QC3

INSPECT POWDER COAT/CHEMICAL CONVERSION



Comment: INSPECT POWDER COAT/CHEMICAL CONVERSION

07/11/30

16.0

QC5

INSPECT WORK TO CURRENT STEP



Comment: INSPECT WORK TO CURRENT STEP

07/11/30

Dart Aerospace Ltd

| W/O: | | WORK ORDER CHANGES | | | | | |
|------|------|--------------------|----|------|-----|-------------------------------------|--------------------------|
| DATE | STEP | PROCEDURE CHANGE | By | Date | Qty | Approval Chief Eng / Prod Mgr | Approval QC Inspector |
| | | | | 1 | | | |
| | | | | | | | |

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

QA: N/C Closed: _____ Date: _____

| NCR: | | WORK ORDER NON-CONFORMANCE (NCR) | | | | | | |
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Drawing Name: 407 FWD X-TUBE

Job Number: 33322

Part Number: D407667105

Job Number:



Seq. #:

Machine Or Operation:

Description :

17.0

OUTSIDE SERVICE

OUTSIDE SERVICES



Comment: Sub-Contracting OUTSIDE SERVICES
Liquid Penetrant Inspection as per QSI 0380r
Issue P/O: 5178 LPI as per ASTM 1417
Level 2 Attach copy of NDT results to work order

CD 07/11/30 (1)

18.0

PACKAGING 1

PACKAGING RESOURCE #1



Comment: PACKAGING RESOURCE #1
Inspect for transit damage
Ensure copy of NDT results attached to work order.

CD 07/11/30 (1)

19.0

QC6

DIMENSIONAL CHECK



Comment: Inspect for damage & ensure results are as per Dwg D206-667-103

CD 07/11/30

20.0

SPRAY PAINTING

SPRAY PAINTING



Comment: SPRAY PAINTING

RT 07-12-01

1-Prime inside and outside crosstube as per QSI 005 4.2

2-Paint outside crosstube with White Imron as per QSI 005 4.2

RT 07-12-02

21.0

QC14

INSPECT SPRAY PAINT



Comment: Inspect Spray Paint
Wrap in plastic bag to protect from scratches

ml 07 12 18

(1)

22.0

D2856400

Abrasion Strip



Comment: Qty.: 1.2138 f(s)/Unit Total: 1.2138 f(s) (*cut to 4"*)

Pick:

Qty Part number Description Batch

2 D2856-400 (*cut to 6.94"*) Abrasion Strip *25656*

ml 07 12 18

23.0

D2873043

Nut Plate Assembly



Comment: Qty.: 2.0000 Each(s)/Unit Total: 2.0000 Each(s)

Pick:

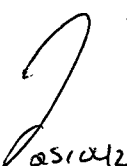
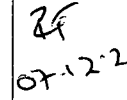

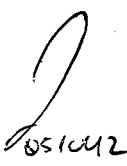

Qty Part number Description Batch

2 D2873-043 Nut Plate *33422 / 34061*

RT 07-12-01

| W/O: | | WORK ORDER CHANGES | | | | | |
|------|------|--------------------|----|------|-----|-------------------------------------|--------------------------|
| DATE | STEP | PROCEDURE CHANGE | By | Date | Qty | Approval Chief Eng / Prod Mgr | Approval QC Inspector |
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Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes ☒ No ☐ DQA: D Date: 08/01/08
 QA: N/C Closed: _____ Date: _____

| NCR: | | WORK ORDER NON-CONFORMANCE (NCR) | | | | | | |
|----------|------|--|--|--|---|---|--|--|
| DATE | STEP | Description of NC Section A | Corrective Action Section B | | | Verification Section C | Approval Chief Eng | Approval QC Inspector |
| | | | Initial Chief Eng | Action Description Chief Eng | Sign & Date | | | |
| 07-12-05 | 20.0 | One side of the tube is a little shy on the white paint. And a tone of primer is visible. R.C. too light of application of Imvco. |  08/01/08 | Scuff entire surface & recoat white Imvco per Q51005 |  07-12-20 |  7/12/21 |  08/01/08 |  07-12-05 |
| | | | | | | | | |
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Process Sheet

Customer: CU-DAR001 Dart Helicopters Services

Drawing Name: 407 FWD X-TUBE

Job Number: 33322

Part Number: D407667105

Job Number:



Seq. #:

Machine Or Operation:

Description :

24.0

D2873045

Nut Plate Assembly



Comment: Qty.: 2.0000 Each(s)/Unit Total : 2.0000 Each(s)

Pick:

Qty Part number Description Batch

2 D2873-045

Nut Plate

34077

RT 07-12-01

25.0

D28911

Support 2.25 dia



Comment: Qty.: 2.0000 Each(s)/Unit Total : 2.0000 Each(s)

Pick:

Qty Part number Description Batch

2 D2891-1

Support

34062

ml 07 12 18

26.0

MS20601AD4W10

RIVET



Comment: Qty.: 14.0000 Each(s)/Unit Total : 14.0000 Each(s)

Pick:

Qty Part number Description Batch

14 MS20601AD4W10 Rivet

104885

RT 07-12-01

27.0

MS2192020

Clamp (per MIL-DTL-8783C)



Comment: Qty.: 4.0000 Each(s)/Unit Total : 4.0000 Each(s)

Pick:

Qty Part number Description Batch

4 MS21920-20

Clamp

103478

ml 07 12 18

28.0

LANDING GEAR 1

LANDING GEAR RESOURCE 1



Comment: LANDING GEAR RESOURCE 1

1-Install abrasion strips as per QSI 035 using DT8579. Note: (3) top holes should be facing up.

2-Install supports and clamps as per Dwg D407-667-145. Torque clamps to 80-100 in lb

3-Install nut plates as per Dwg D407-667-145. Touch-up rivet heads with Imron paint.

ml
07 12 18 (1)
RT 07-12-01

| W/O: | | WORK ORDER CHANGES | | | | | |
|------|------|--------------------|----|------|-----|-------------------------------------|--------------------------|
| DATE | STEP | PROCEDURE CHANGE | By | Date | Qty | Approval Chief Eng / Prod Mgr | Approval QC Inspector |
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Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

QA: N/C Closed: _____ Date: _____

| NCR: | | WORK ORDER NON-CONFORMANCE (NCR) | | | | | | |
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NOTE: Date & initial all entries

Date: Monday, 7/9/2007 11:40:02 AM
User: Kim Johnston

Process Sheet

Customer: CU-DAR001 Dart Helicopters Services

Drawing Name: 407 FWD X-TUBE

Job Number: 33322

Part Number: D407667105

Job Number:



Seq. #:

Machine Or Operation:

Description :

29.0

QC5

INSPECT WORK TO CURRENT STEP



Comment: INSPECT WORK TO CURRENT STEP

6/12/21 (40)

30.0

PACKAGING 1

PACKAGING RESOURCE #1



Comment: PACKAGING RESOURCE #1
Pick Packing Kit

31.0

AN532A

Bolt



Comment: Qty.: 4.0000 Each(s)/Unit Total: 4.0000 Each(s)
Bolt
Batch: M105408, SP

32.0

MS21042L5

Nut



Comment: Qty.: 4.0000 Each(s)/Unit Total: 4.0000 Each(s)
Nut
Batch: M105430, SO

33.0

AN510A

Bolt



Comment: Qty.: 10.0000 Each(s)/Unit Total: 10.0000 Each(s)
Batch: M104746, 3

M104746, 3

34.0

AN530A

BOLT



Comment: Qty.: 4.0000 Each(s)/Unit Total: 4.0000 Each(s)
Pick: Packing Kit
Qty Part number Description Batch
4 AN5-30A Bolt M103641, SP

35.0

AN960JD516

Washer



Comment: Qty.: 18.0000 Each(s)/Unit Total: 18.0000 Each(s)
Pick: Packing Kit
Qty Part number Description Batch
18 AN960JD516 Washer M104156, 7/12/27 SO (x)

| W/O: | | WORK ORDER CHANGES | | | | | |
|------|------|--------------------|----|------|-----|-------------------------------------|--------------------------|
| DATE | STEP | PROCEDURE CHANGE | By | Date | Qty | Approval Chief Eng / Prod Mgr | Approval QC Inspector |
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Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

QA: N/C Closed: _____ Date: _____

| NCR: | | WORK ORDER NON-CONFORMANCE (NCR) | | | | | | |
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NOTE: Date & initial all entries

Date: Monday, 7/9/2007 11:40:02 AM
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Process Sheet

Customer: CU-DAR001 Dart Helicopters Services

Drawing Name: 407 FWD X-TUBE

Job Number: 33322

Part Number: D407667105

Job Number:



Seq. #:

Machine Or Operation:

Description :

36.0

QC4

INSPECT 100% KITS FOR COMPLETENESS



Comment: INSPECT 100% KITS FOR COMPLETENESS

37.0

PACKAGING 1

PACKAGING RESOURCE #1



Comment: PACKAGING RESOURCE #1

Identify and pack for shipping as per PPP D407-667-105

Location:

PPP Rev:

Rev B

JS 7/12/21

(X1)

38.0

QC21

FINAL INSPECTION/W/O RELEASE



(1)

Comment: FINAL INSPECTION/W/O RELEASE

208/01/03

Job Completion



run 2008/1/2
W

| W/O: | | WORK ORDER CHANGES | | | | | |
|------|------|--------------------|----|------|-----|-------------------------------------|--------------------------|
| DATE | STEP | PROCEDURE CHANGE | By | Date | Qty | Approval Chief Eng / Prod Mgr | Approval QC Inspector |
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Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

QA: N/C Closed: _____ Date: _____

| NCR: | | WORK ORDER NON-CONFORMANCE (NCR) | | | | | | |
|------|------|----------------------------------|-----------------------------|---------------------------------|----------------|---------------------------|-----------------------|--------------------------|
| DATE | STEP | Description of NC Section A | Corrective Action Section B | | | Verification Section C | Approval Chief Eng | Approval QC Inspector |
| | | | Initial Chief Eng | Action Description Chief Eng | Sign & Date | | | |
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NOTE: Date & initial all entries

| | | | |
|---|--|---------------------|---------------------|
| DART AEROSPACE LTD | | Work Order: | 33322 |
| Description: Crosstube Assembly | | Part Number: | D407-667-145 |
| Inspection Dwg: D407-667-145 Rev: B | | Page 1 of 1 | |

FIRST ARTICLE INSPECTION CHECKLIST

☒ First Article
 ☐ Prototype

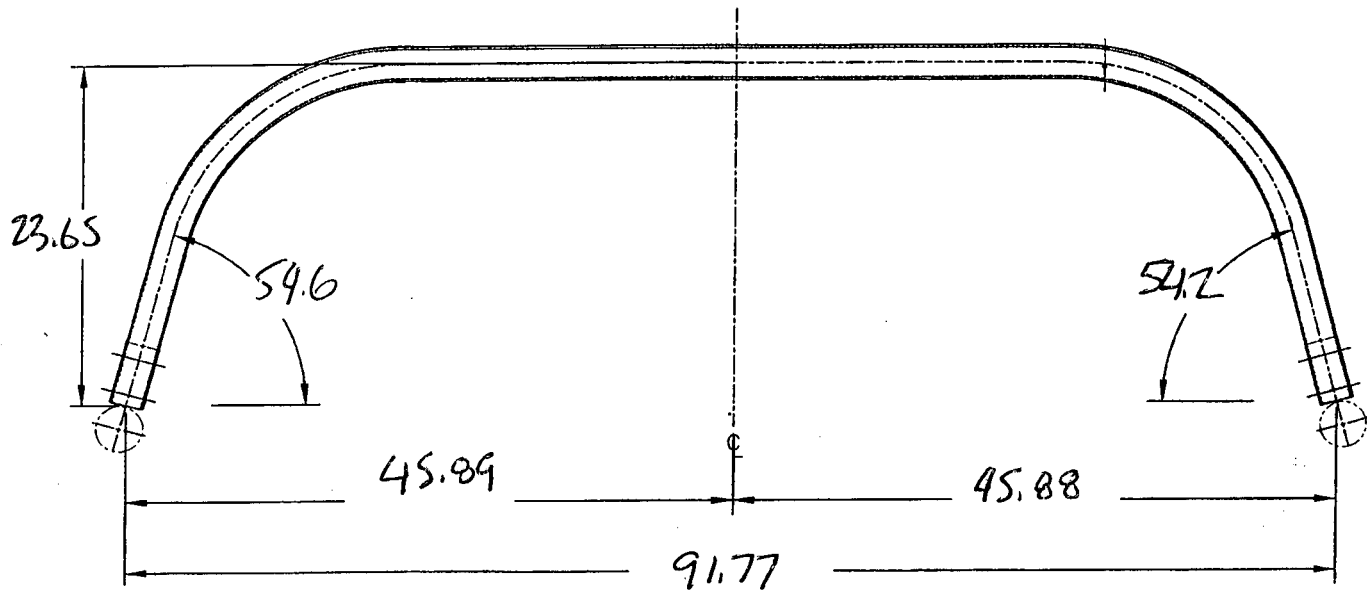
| Inspection Sheet Drawing Dimension | | Tolerance | Actual Dimension | Accept | Reject | Method of Inspection | Comments |
|------------------------------------|--------|---------------|------------------|--------|--------|----------------------|----------|
| SIDE A | 2.240 | +0.005/-0.000 | 2.244 | ✓ | | | |
| | 1.865 | +0.005/-0.000 | 1.869 | ✓ | | | |
| | 1.878 | +0.005/-0.000 | 1.882 | ✓ | | | |
| | 1.970 | +0.005/-0.000 | 1.973 | ✓ | | | |
| | 2.030 | +0.005/-0.000 | 2.033 | ✓ | | | |
| | 2.165 | +0.005/-0.000 | 2.169 | ✓ | | | |
| | | | | | | | |
| | | | | | | | |
| | 0.125 | +/-0.010 | .125 | ✓ | | | |
| | R0.063 | +/-0.010 | .063 | ✓ | | | |
| | R0.500 | +/-0.010 | .500 | ✓ | | | |
| | R0.063 | +/-0.010 | .063 | ✓ | | | |
| | 4.438 | +/-0.010 | 4.438 | ✓ | | | |
| | | | | | | | |
| SIDE B | 2.240 | +0.005/-0.000 | 2.243 | ✓ | | | |
| | 1.865 | +0.005/-0.000 | 1.869 | ✓ | | | |
| | 1.878 | +0.005/-0.000 | 1.882 | ✓ | | | |
| | 1.970 | +0.005/-0.000 | 1.972 | ✓ | | | |
| | 2.030 | +0.005/-0.000 | 2.032 | ✓ | | | |
| | 2.165 | +0.005/-0.000 | 2.169 | ✓ | | | |
| | | | | | | | |
| | | | | | | | |
| | 0.125 | +/-0.010 | .125 | ✓ | | | |
| | R0.063 | +/-0.010 | .063 | ✓ | | | |
| | R0.500 | +/-0.010 | .500 | ✓ | | | |
| | R0.063 | +/-0.010 | .063 | ✓ | | | |
| | 4.438 | +/-0.010 | 4.438 | ✓ | | | |
| | 113.20 | +/-0.020 | 113.2 | ✓ | | | |
| | | | | | | | |

| | | | | | |
|---------------------|-----------------|--------------------|-----------------|----------------------------|-----|
| Measured by: | BG | Audited by: | Amf | Prototype Approval: | N/A |
| Date: | 07.11.21 | Date: | 07/11/21 | Date: | N/A |

| Rev | Date | Change | Revised by | Approved |
|-----|----------|------------------------------|------------|----------|
| A | 04.04.21 | New Issue (P/O D407-667-105) | KJ/RF | |
| B | 06.03.09 | Dwg Rev updated | KJ/JLM | |

| | | |
|---|---------------------|---------------------|
| DART AEROSPACE LTD | Work Order: | 33322 |
| Description: Crosstube High Fwd (407) | Part Number: | D407-667-105 |
| Inspection Dwg: D407-667-145 Rev: B | | Page 1 of 1 |

| Required Dimension | Min | Max |
|---------------------------|------------|------------|
| Height | 23.48 | 23.60 |
| 1/2 Span | 45.88 | 46.0 |
| Angle | 54 | 56 |
| Total Span | 91.76 | 92.0 |



| Comments |
|-----------------|
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|------------------------|----------|
| QC15 Inspection | <i>P</i> |
| Date | 07.10.27 |

| Rev | Date | Change | Revised by | Approved |
|------------|-------------|---------------|-------------------|--------------------|
| A | 07.02.06 | New Issue | KJ/JM | <i>[Signature]</i> |

SHOP COPY
RETURN TO
ENGINEERING
UNCONTROLLED COPY
SUBJECT TO AMENDMENT
WITHOUT NOTICE
WORK ORDER
NO. *[Signature]*



| | | | |
|------------------|----------------|---|------------------------|
| DESIGN PH | DRAWN BY PH | DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA | |
| CHECKED DS | APPROVED DS | DRAWING NO. D407-667-145 | REV. B SHEET 1 OF 3 |
| DATE 05.07.26 | | TITLE CROSSTUBE ASS'Y (407 HIGH FWD) | SCALE NTS |
| A | 02.05.08 | NEW ISSUE | |
| B | 05.07.26 | ADD HOLES AND NUT PLATES FOR COMPATABILITY WITH BHT/AA SKIDTUBES | |

RELEASED
05.07.26

UNDER REVIEW
06.08.10
re-draw detail
PH
07.07.09

| Qty | Part Number | Description |
|-----|---------------|-----------------------------------|
| X | D407-667-145 | CROSSTUBE ASSEMBLY (407 HIGH FWD) |
| 1 | D6010-115 | CROSSTUBE |
| 2 | D2856-400-694 | ABRASION STRIP |
| 2 | D2873-043 | NUT PLATE |
| 2 | D2873-045 | NUT PLATE |
| 2 | D2891-1 | SUPPORT |
| 14 | MS20601AD4W10 | RIVET (OR NAS9302B-4-10) |
| 4 | MS21920-20 | CLAMP |

GENERAL NOTES:

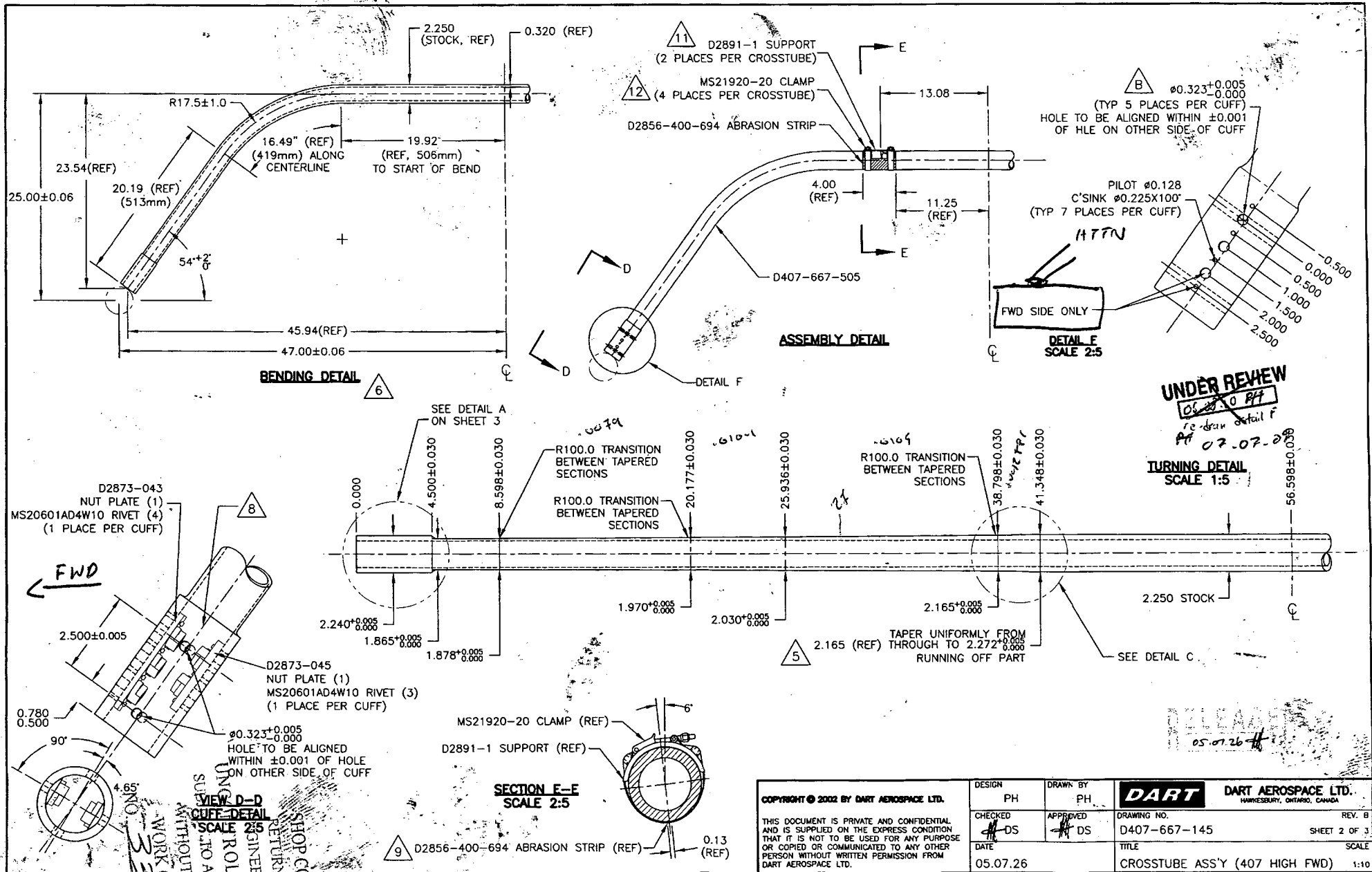
- 1) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED.
- 2) MATERIAL: MANUFACTURED FROM D6010-115
FINISHED LENGTH = 113.20±0.020
- 3) FINISH: CHEMICAL CONVERSION COAT PER DART QSI 005 4.1
PRIME INSIDE AND OUTSIDE PER DART QSI 005 4.2
PAINT OUTSIDE PER DART QSI 005 4.2
- 4) PART IS SYMMETRIC ABOUT CENTERLINE.
- 5) RUN-OFF PART. BLEND OUT EDGE LONGITUDINALLY, TRANSITION SHOULD BE SMOOTH.
- 6) BEND PROGRESSIVELY WITH A MINIMUM OF 6 PASSES. MAXIMUM TUBE FLATTENING DUE TO BENDING IS 6% BASED ON O.D.
- 7) LIQUID PENETRANT INSPECT OUTSIDE SURFACE OF CROSSTUBE PER QSI 038.
- 8) SCRIBE DART PART NUMBER AND BATCH NUMBER IN THIS AREA WITH VIBRATING STYLUS.
- 9) INSTALL D2856-400-694 ABRASION STRIP WITH A 0.13 (REF) GAP ON BOTTOM SIDE OF CROSSTUBE, CENTERED OPPOSITE D2891-1 SUPPORT, PER QSI 035.
- 10) EXTREME CARE MUST BE TAKEN TO PROTECT THE OUTSIDE SURFACE OF THE TUBE. THE OUTSIDE SURFACE MUST BE SMOOTH AND FREE FROM SURFACE DEFECTS SUCH AS SCRATCHES, NICKS, OR DENTS. DEFECTS UP TO 0.005" MAY BE BLENDED OUT LONGITUDINALLY. CIRCUMFERENTIAL GRIND MARKS ARE UNACCEPTABLE.
- 11) SEAL EDGES OF SUPPORTS AND ABRASION STRIP USING SIKAFLEX-241/291 SEALANT (OPTIONAL).
- 12) TORQUE CLAMPS 80 TO 100 IN-LB.

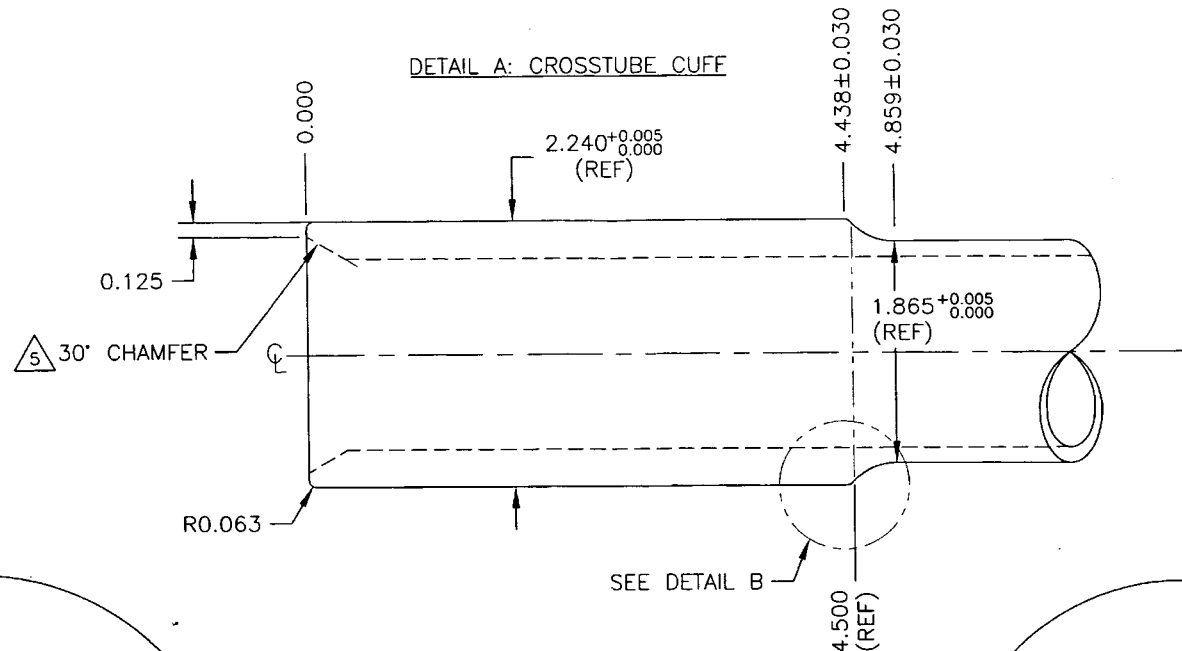
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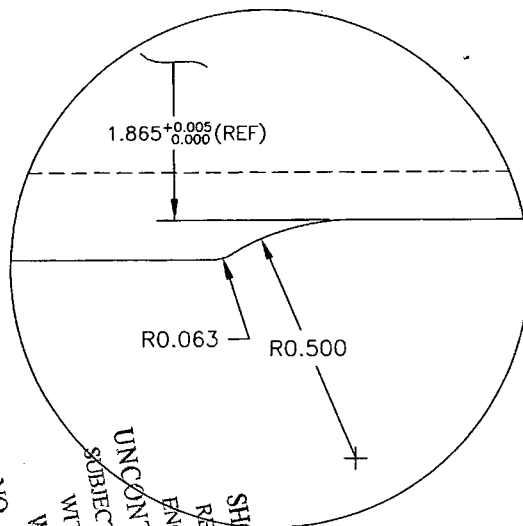




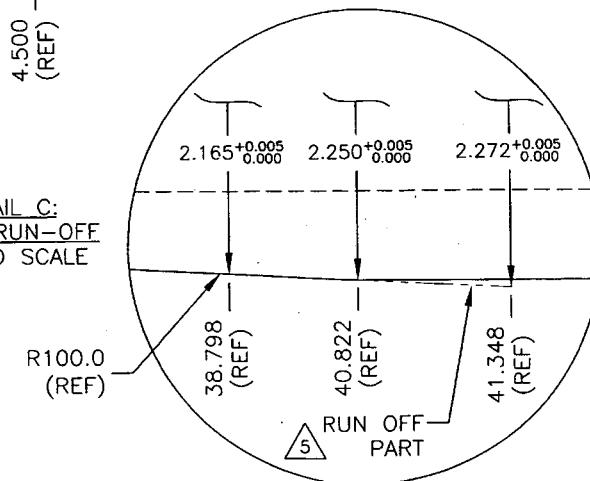


UNDER REVIEW
~~PH~~ 07.07.09
 Re-draw Detail F

RELEASED
 05.07.26



DETAIL C:
 TAPER RUN-OFF
 NOT TO SCALE



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| | | CHECKED | APPROVED | DRAWING NO. | | REV. B |
| | | <i>ADS</i> | <i>ADS</i> | D407-667-145 | | SHEET 3 OF 3 |
| | | DATE | TITLE | SCALE | | |
| | | 05.07.26 | CROSSTUBE ASS'Y (407 HIGH FWD) | 1:1 | | |



LIQUID PENETRANT TEST REPORT

P - 1082 1

PAGE 1 OF 1

| | | | | | |
|------------------|---|-----------------|-------------------|-----------|---|
| CLIENT | DART AEROSPACE | DATE | NOV 30 2007 | TIME | AM <input type="checkbox"/> PM <input type="checkbox"/> |
| ATTENTION | LINDA LACELLE | ACUREN JOB NO. | 188 07 1078 | | |
| ADDRESS | 1270 ABERDEEN ST | PO/NO. | | | |
| | HAWKESBURY, ONT. | WORK LOCATION | HAWKESBURY | | |
| | | ACCEPTANCE STD. | ASTM 1417/QSI-038 | REV./DATE | 2005 |
| PROJECT | 212/205 HIGH FED X TUBES, 407 FWD X TUBE | | | | |
| ITEM(S) EXAMINED | JOB #'S 212/205:35538,35539,35540,35541,35891,35892 JOB#S 407: 33322,33323. | | | | |

| | | | | |
|---------------------------------|--|----------------|------------------------|-----------|
| JOB DESCRIPTION | PROCEDURE NO. LT-0002 | REV./DATE | TECHNIQUE NO. LT-TECH2 | REV./DATE |
| PART NO. D212664101, D407667105 | MATERIAL | ALODINED ALUM. | THICKNESS | |
| SCOPE | WET FLOURESCENT LIQUID PENETRANT INSPECTION CARRIED OUT ON 100% EXTERNAL SURFACE | | | |

TEST DETAILS

| | | | | | |
|-----------------------|---|----------------------------------|--|--|--|
| METHOD | <input checked="" type="checkbox"/> FLUORESCENT | <input type="checkbox"/> VISIBLE | <input checked="" type="checkbox"/> WATER WASH | <input type="checkbox"/> SOLVENT REMOVABLE | <input type="checkbox"/> POST EMULSIFIED |
| FAMILY BRAND | MAGNAFLUX | | BLACK LGHT8171 | <input type="checkbox"/> OUTPUT > 1000 μ W/cm ² | <input type="checkbox"/> AMBIENT < 2 fc |
| PENETRANTZL67 | MINIMUM DWELL TIME | 45 MIN. | LIGHTING EQUIP. | <input type="checkbox"/> FLASHLIGHT | <input type="checkbox"/> TROUBLELIGHT |
| PENETRANT REMOVER H2O | MINIMUM DRY TIME | >10 MIN. | OTHER | CAL SEP 18 07 | |
| DEVELOPER SKDS2 | MINIMUM DWELL TIME | 10 MIN. | LIGHT METER S/N | CAL DUE DATE | |
| DEVELOPER TYPE | <input checked="" type="checkbox"/> NON AQUEOUS | <input type="checkbox"/> AQUEOUS | <input type="checkbox"/> DRY | | |

TEST SURFACE

| | | | | | |
|---------------------|--|---|--|---------------------------------------|--|
| SURFACE CONDITION | <input type="checkbox"/> AS GROUND | <input checked="" type="checkbox"/> AS WELDED | <input type="checkbox"/> MACHINED | <input type="checkbox"/> SHOT BLASTED | <input checked="" type="checkbox"/> CLEAN BARE METAL |
| SURFACE TEMPERATURE | <input type="checkbox"/> < - 4°C/ 20°F | <input type="checkbox"/> - 4°C/ 20°F TO 10°C/50°F | <input type="checkbox"/> 10°C/50°F TO 52°C/125°F | <input type="checkbox"/> > 52°C/125°F | |

RESULTS- (☐ METRIC ☒ IMPERIAL)

FLUORESCENT LIQUID PENETRANT
CARRIED OUT ON 100% EXTERNAL
SURFACE ON:
212/205 HIGH FED X TUBES JOB #'S:
35538,35539,35540,35541,35891,35892

407 FWD X TUBE JOB#'S: 33322,33323.

RESULTS: NO INDICATION OF DEFECTS.
ITEMS ACCEPTABLE TO STANDARD

Scope of Services

The agreement of Acuren Group Inc. to perform services extends only to those services provided for in writing. Under no circumstances shall such services extend beyond the performance of the requested services. It is expressly understood that all descriptions, comments and expressions of opinion reflect the opinions or observations of Acuren Group Inc. based on information and assumptions supplied by the owner operator and are not intended nor can they be construed as representations or warranties. Acuren Group Inc. is not assuming any responsibilities of the owner operator and the owner operator retains complete responsibility for the engineering, manufacture, repair and use decisions as a result of the data or other information provided by Acuren Group Inc. In no event shall Acuren Group Inc.'s liability in respect of the services referred to herein exceed the amount paid for such services.

Standard of Care

In performing the services provided, Acuren Group Inc. uses the degree, care and skill ordinarily exercised under similar circumstances by others performing such services in the same or similar locality. No other warranty, expressed or implied, is made or intended by Acuren Group Inc.

SIGNATURES

| | | | |
|-------------------------|----------------------------|----------------------------|-----------|
| CLIENT REPRESENTATIVE | | DTR # E 21505 | |
| TECHNICIAN (SIGNATURE): | | REPORT REVIEWED BY: | |
| NAME (PRINT): | JASON HEWETT | NAME INITIALS | |
| | 1 ST TECHNICIAN | 2 ND TECHNICIAN | |
| CGSB LEVEL | 2 | CGSB LEVEL | SNT LEVEL |
| CGSB REG. No | 6156 | CGSB REG. No | |

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